



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,663	06/23/2005	Gary Wayne Yewdall	YEW0101PUSA	2899
22045	7590	03/14/2008		
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			EXAMINER LEE, CLOUD K	
			ART UNIT 3753	PAPER NUMBER
			MAIL DATE 03/14/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/540,663	<b>Applicant(s)</b> YEWDALL ET AL.	
	<b>Examiner</b> CLOUD K. LEE	<b>Art Unit</b> 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/18/06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: reference number 12 is not mentioned in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the internal shape that allows the fluid to drain out of the valve body (claims 1, 7 and 11), a thermodynamic external body shape to maximize achievable temperature in the down stream side and downstream connector of the valve (claims 5, 9 and 13) and a polymeric insulating coating (claims 6, 10 and 14) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4-6, 9-10 and 13-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is vague and indefinite as to what is meant by “to promote free draining including a small discontinuity to break surface tension” in claim 4 because Applicant has recited these functional limitations without further define how or why the structure of the claimed invention is capable of performing these functional limitations in the specification. Also, one of ordinary skill

in the art would not be apprised of the metes and bounds of “promote free draining including a small discontinuity to break surface tension”. What is the scope of these limitations? Is applicant claiming the smoothness of the connector has “no surface tension” or “small surface tension”? If so, what is the coefficient of surface tension is being considered as “small surface tension”?

It is vague and indefinite as to what is meant by “a thermodynamic external body shape to maximize achievable temperature” in claims 5, 9 and 13. It is unclear that what is the shape of claimed invention is capable of performing “maximize achievable temperature”. One of ordinary skill in the art would not be apprised of the metes and bounds of these limitations.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-5, 7-9, 11-13 (as best understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Kusumoto et al (US Patent No. 6,227,236).

Kusumoto et al. discloses a smooth and contoured body with an integral upstream connector (2), downstream connector (3) and defined flow path. A flexible sealing membrane (6) being selectively moveable into contact with the said valve body to close said valve, selectively moveable out of contact with the said valve body to open said valve and selectively operable to a range of positions to vary the flow rate of medium through the valve. Kusumoto et al. also defined internal shape that allows the medium to drain out of the said valve body. An elongate

heater (19) secured into said valve body in a location so as not to be in contact with the medium or disrupt the internal smooth and contoured body, said heater being operative to heat the valve body to a predetermined temperature. Kusumoto et al. capable of raising the temperature of said valve body around the downstream side of the metal sealing face (4a) that comes into contact with the flexible sealing membrane to above 121.degree. C (Col 5 lines 56-61). A thermodynamic external body shape to maximize the heat into the metal sealing face (4a) that comes into contact with the flexible sealing membrane (the valve body is made by metal and allow the body to maximize the heat into the metal sealing face (4a)).

7. Claims 1-5, 7-9 and 11-13 (as best understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Chovan (US Patent No. 5,941,271).

Chovan discloses a smooth and contoured body with an integral upstream connector (20), downstream connector (18) and defined flow path. A flexible sealing membrane (30) being selectively moveable into contact with the said valve body to close said valve, selectively moveable out of contact with the said valve body to open said valve and selectively operable to a range of positions to vary the flow rate of medium through the valve. Chovan also defined internal shape that allows the medium to drain out of the said valve body. An elongate heater (90) secured into said valve body in a location so as not to be in contact with the medium or disrupt the internal smooth and contoured body, said heater being operative to heat the valve body to a predetermined temperature. Chovan capable of raising the temperature of said valve body around the downstream side of the metal sealing face (24) that comes into contact with the flexible sealing membrane. A thermodynamic external body shape to maximize the heat into the

metal sealing face (24) that comes into contact with the flexible sealing membrane (the valve body is made by metal and allow the body to maximize the heat into the metal sealing face (24)).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 6, 10 and 14 (as best understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Kusumoto et al (US Patent No. 6,227,236) in view of Facas et al (US Patent No. 6,311,710).

Kusumoto et al. discloses an elongate heater secured into the valve body, however, Kusumoto et al. fails to disclose a polymeric insulating coating.

Facas et al. discloses a polymeric baffle-insulator for reducing heat transfer (see Col 5 lines 11-21). It would have been obvious to one having ordinary skill in the art at the time the

Art Unit: 3753

invention was made to have provided a polymeric insulating coating in order to effectively reduce the heat transfer between the valve body to the surrounding as taught by Facas et al.

10. Claims 6, 10 and 14 (as best understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Chovan (US Patent No. 5,941,271) in view of Facas et al (US Patent No. 6,311,710).

Chovan discloses an elongate heater secured into the valve body, however, Chovan fails to disclose a polymeric insulating coating.

Facas et al. discloses a polymeric baffle-insulator for reducing heat transfer (see Col 5 lines 11-21). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided a polymeric insulating coating in order to effectively reduce the heat transfer between the valve body to the surrounding as taught by Facas et al.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sparks (US Patent No. 5,531,245) discloses a similar invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLOUD K. LEE whose telephone number is (571)272-7206. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on (571)272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Rivell/  
Primary Examiner, Art Unit 3753

CL